NIH SPECIFICATION
NIH 41 Open Formula Rodent Irradiated Diet (18% Crude Protein, 5% Crude Fat)

INGREDIENTS

Ingredients	Percentage by Weight
Ground whole hard wheat	34.90
Ground #2 yellow corn	21.00
Ground whole oats	10.00
Wheat middlings	10.00
Fish meal (60% protein)	9.00
Soy oil	2.00
Soybean meal (47.5% protein)	5.00
Alfalfa meal (17% protein)	2.00
Corn gluten meal (60% protein)	2.00
Dicalcium phosphate	1.50
Yeast-Brewers	1.00
Premixes	0.60
Ground limestone	0.50
Salt	0.50
Total	**100.00**

All ingredients shall be ground to pass through a U.S. Standard Screen No. 16 prior to mixing.

VITAMIN FORTIFICATION PER TON (2,000 LBS.) OF FINISHED PRODUCT

Vitamin	Amount	Source
A	14,500,000 IU	Vitamin A Palmitate or Acetate
D_3	4,600,000 IU	D activated animal sterol
K	2.8 g.	Menadione activity
dl alpha-tocopheryl acetate	20,000 IU	
Choline	560 g.	Choline Chloride
Folic Acid	2.2 g.	
Niacin	30 g.	
d Pantothenic Acid	18 g.	d-Calcium Pantothenate
Riboflavin supplement	6.6 g.	
Thiamin	10 g.	Thiamin mono nitrate
B_{12} supplement	58.2 mg.	
Pyridoxine	1.7 g.	Pyridoxine hydrochloride
Biotin	113.5 mg.	d-Biotin

MINERAL FORTIFICATION PER TON (2,000 LBS.) OF FINISHED PRODUCT

Mineral	Amount	Source
Cobalt	400 mg.	Cobalt carbonate
Copper	4 g.	Copper sulfate
Iron	60 g.	Iron sulfate
Magnesium	400 g.	Magnesium oxide
Manganese	100 g.	Manganese oxide
Zinc	10 g.	Zinc oxide
Iodine	1500 mg.	Calcium iodate

These concentrations of vitamins and minerals shall be added to the ration via two separate (vitamin and mineral) premixes. For the mineral fortification, the actual amount of each element required is specified. Therefore, the contractor shall adjust the amount of each compound used in the premix according to its mineral concentration.

NUTRIENT STANDARDS

Micro Analysis - The total calculated concentrations of nutrients in the ration from ingredients and from the fortifications at the time of manufacture should be as follows:

Component	Measurement	Requirement	Amount
Crude protein	%	Minimum	18.0
Crude fat	%	Minimum	5.0
Crude fiber	%	Maximum	5.0
Ash	%	Maximum	8.0

Amino Acids (% of total diet)	Minimum
Arginine	.90
Lysine	.85
Methionine	.35
Cystine	.25
Tryptophan	.20
Glycine	.95
Histidine	.38
Leucine	1.40
Isoleucine	.95
Phenylalanine	.85
Tyrosine	.60
Threonine	.65
Valine	.90

Minerals	Measurement	Requirement	Amount
Calcium	%	Minimum	1.00
Phosphorous	%	Minimum	.85

Minerals	Measurement	Requirement	Amount
Potassium	%	Minimum	.55
Sodium	%	Minimum	.25
Magnesium	%	Minimum	.15
Iron	PPM	Minimum	300.00
Zinc	PPM	Minimum	40.00
Manganese	PPM	Minimum	140.00
Copper	PPM	Minimum	12.00
Cobalt	PPM	Minimum	0.70
Iodine	PPM	Minimum	1.80

Vitamins	Measurement	Requirement	Amount
Vitamins A	IU/g	Minimum	17.0 (8.0)[1]
Vitamin D	IU/g	Minimum	4.0
Alpha-tocopherol	PPM	Minimum	45.0
Thiamin	PPM	Minimum	15.0
Riboflavin	PPM	Minimum	9.0
Niacin	PPM	Minimum	70.0
Pantothenic Acid	PPM	Minimum	30.0
Choline	PPM	Minimum	1900.0
Pyridoxine	PPM	Minimum	10.0
Folic Acid	PPM	Minimum	2.0
Biotin	PPM	Minimum	.2
Vitamin B_{12}	mcg/kg	Minimum	75.0
Vitamin K	PPM	Minimum	2.0

[1] True Vitamin A activity by HPLC method